

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 September 2000 (08.09.2000)

PCT

(10) International Publication Number
WO 00/52866 A3

(51) International Patent Classification⁷: **G06F 17/60**

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(21) International Application Number: **PCT/US00/04819**

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(22) International Filing Date: 25 February 2000 (25.02.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/260,384 2 March 1999 (02.03.1999) US

(71) Applicant: **ESIGN, INC. [US/US]**; 10127 Linda Ann Place, Cupertino, CA 95014 (US).

Published:

— With international search report.

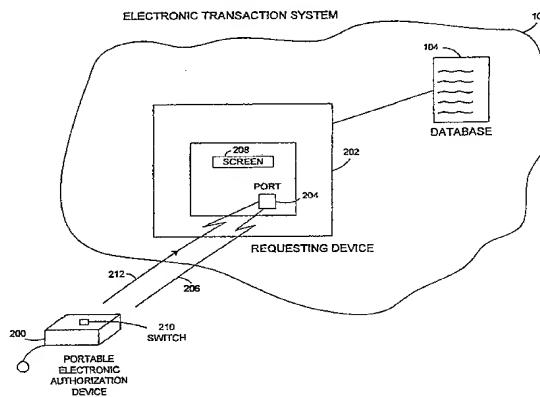
(72) Inventor: **WANG, Ynjiun**; 10127 Linda Ann Place, Cupertino, CA 95014 (US).

(88) Date of publication of the international search report:
21 December 2000

(74) Agents: **ASHBY, David, C. et al.**; Flehr, Hohbach, Test, Albritton & Herbert LLP, Suite 3400, 4 Embarcadero Center, San Francisco, CA 94111-4187 (US).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PORTABLE ELECTRONIC CHARGE AND AUTHORIZATION DEVICES AND METHODS THEREFOR



WO 00/52866 A3

(57) Abstract: A portable transaction arrangement for permitting a user (200) to conduct a transaction vis-à-vis a charge card terminal of an electronic transaction system (102). The charge card terminal is configured to communicate with a charge card for the purpose of conducting the charge card transaction. The charge card is one of a magnetic stripe card and an electronic smart card. The portable transaction arrangement includes an emulation card having an emulation card interface. The emulation card interface emulates an interface of the charge card. The interface (202) of the charge card facilitates communication between the charge card and the charge card terminal. There is a portable emulation card to store first charge card data pertaining to a first charge card of the user, and an authentication mechanism. The portable emulation card writes the first charge card data to the emulation card if the user is authenticated, thereby allowing the emulation card to appear through the emulation card interface after writing, and enabling the charge card terminal to read the first charge card data from the emulation card.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/04819

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 6,006,328 A (DRAKE) 21 DECEMBER 1999, see the abstract, and the summary of the invention.	1-84
A,P	US 5,901,228 A (CRAWFORD) 04 MAY 1999, the entire patent.	1-84
A	US 5,815,657 A (WILLIAMS ET AL.) 29 SEPTEMBER 1998, the entire patent.	1-84
A,P	US 5,963,924 A (WILLIAMS ET AL.) 05 OCTOBER 1999, the summary of the invention.	1-84
A,P	US 6,016,484 A (WILLIAMS ET AL.) 18 JANUARY 2000, the background and the summary of the invention.	1-84

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/04819

B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

WEST1.2/DERWENT, DIALOGUE CLASSIC, NPL (CORPORATE RESOURCE NET)
search terms: register\$3 same user\$1, public with key\$1, identif\$ same key\$1, encrypt\$3 or decrypt\$3, approv\$3 with
request\$1, write same authenticat\$3, transact\$3 and (authenticat\$3 same authoriz\$5 same emulat\$), ((memory or stor\$)
same write) and smart, interac\$3 same imitat\$3, (card with terminal) same interfac\$3 same emulat\$3, scal\$3 or
vendor\$1, (on-line or on-line) with transact\$, opinion\$ or review\$1 or rating\$1, attribute\$1 or match\$3, crit\$ or
specification\$1, www or web or internet.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/04819

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G06F 17/60
US CL :705/41

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/41, 35, 39, 43, 44

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Microsoft Press, Microsoft Press Computer Dictionary 3rd edition.
Considine, Van Nostrand's Scientific Encyclopedia 6th edition.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,748,737 A (DAGGAR) 05 MAY 1998, the summary of the invention, col.4 lines 28-35, col.19 lines 25-36.	1-84
Y	US 5,721,781 A (DEO ET AL.) 24 FEBRUARY 1998, the abstract, background, and the summary of the invention, Figs. 7-8, col.4 lines 12-14, col.1 lines 17-30, col.9 lines 24-38, col.12 lines 7-22, and claims 1, 3.	1-84
Y,P	US 5,907,142 A (KELSEY) 25 May 1999, the abstract, col.3 lines 35-62, col.9 lines 3-34.	1-84
Y	US 5,875,394 A (DALY ET AL.) 23 FEBRUARY 1999, the summary of the invention, Fig. 3, col.3 line 30 to col.4 line 10.	1-84



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means		
P document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

10 JUNE 2000

Date of mailing of the international search report

23 AUG 2000

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

CUONG H. NGUYEN

Telephone No. (703) 305-4553